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Demil Dispatch

Recent Progress on the Blue Grass Army Depot Demilitarization Effort

Kentucky Department for Environmental Protection
Division of Waste Management
Hazardous Waste Branch

Inside

KDEP Receives New Operations Center

By: Bill Buchanan Jr.

The Kentucky Department for Environmental Protection has recently begun monitoring of the Blue Grass Army Depot's daily activities in the newly formed Operations Center at the central offices in Frankfort. This operations center is located in the Commissioner's office and is a part of the Environmental Response Team branch. ERT staff man the operations center during regular operating hours throughout the week, and have the option to staff the center full-time during a spill or chemical event at BGAD.

The Operations Center is outfitted with computer terminals for multiple users, conference space, video teleconferencing capabilities, projectors and large screens that allow for the display of critical information during an incident, such as projected chemical agent plumes, facility maps, weather conditions, etc. There will soon be radio communications installed to allow for communication between the central offices and field staff during an incident.

WEBPUFF training, which will allow for stakeholders at KDEP to have input and modeling capabilities to be able to simulate spills and releases for training exercises is available. WEBPUFF is a program that uses simulated agent quantities and meteorological conditions to produce a visual model to indicate the location and direction of a chemical agent plume.

The intention for the Operations Center is to allow the coordination of resources and technical expertise that KDEP would have to offer during any chemical or other significant incident at BGAD. Standard operating procedures are currently being developed that will outline the necessary personnel available to assist in the initial response phase of a release from BGAD that would affect the surrounding community. This expertise will include personnel from the Divisions of Waste Management, Water, and Air, as well as managerial and emergency response personnel and will be crucial to allow for the notification of affected community leaders when it is safe to re-occupy an area that had been contaminated by chemical agents.

The KDEP Operations Center is yet another tool that the department can utilize for increased protection of human health and the environment in case of an incident at BGAD. Should you have any questions about information contained in this article, please contact Bill Buchanan at bill.buchanan@ky.gov

A video conferencing panel and three projectors (two shown) display data to aid staff in response operations.

KDEP Previews New Equipment Arriving at BGCAPP

By: Daniel Walker

In October the Kentucky Department for Environmental Protection (KDEP) permitting team for the Blue Grass Army Depot (BGAD) embarked on a trip to observe two pieces of equipment that will be installed at the Blue Grass Chemical Agent Pilot-Plant (BGCAPP). Accompanying them were Kevin Regan, environmental manager with Bechtel and Jeff Krejsa, an environmental/mechanical engineer for Assembled Chemical Weapons Alternatives (ACWA).

General Atomics testing facility in San Diego was the first stop where the **Energetics Batch Hydrolyzer (EBH)** was undergoing phase two factory acceptance testing. Water and metal part analogs were used to simulate the processing of rocket and projectile components in caustic solution.

When complete the EBH will hydrolyze energetic rocket and projectile portions using hot caustic. Robotic arms load the equipment to minimize the potential for worker exposure and a vibratory conveyor transports processed metals from the EBH to the Metal Parts Treater.

Excitement is building at General Atomics and BGCAPP; the three EBH systems are due to ship as early as March 2010.

The team then traveled to Parsons in Pasco, Washington to view the **Metal Parts Treater (MPT)**. Metal parts are conveyed into the MPT where they are heated using induction heating and superheated steam to 1000°F for 15 minutes in a low oxygen atmosphere to destroy any trace contaminants that may be present. Docimeters, thermocouples, and thermal imaging cameras were various methods used to ensure adequate temperature controls were in place.

Two Metal Parts Treaters at Parsons

Robotic arms (foreground) load Energetic Batch Hydrolyzer (back)

During the visit equipment was being cycled to ensure reliability of mechanical components and repeatability of thermal characteristics. Though not observed, equipment maintenance exercises were also being conducted to test the ease of maintenance in demanding situations.

MPT equipment started arriving at BGCAPP late November 2009.

First-of-a-kind due to their size the EBH and MPT are two highly anticipated acquisitions regarding the progress of BGCAPP. Their timely arrivals are essential due to the fact they are so massive. Both sets of equipment will be put in place and afterward additional construction will proceed around them. Strategic equipment placement has been a major concern due to the relatively small footprint of BGCAPP compared to other chemical agent demilitarization facilities.

MDB Goes 3D

By: Ryan Kirkpatrick

The past year saw considerable progress for the Blue Grass Chemical Agent-Destruction Pilot Plant (BGCAPP). The highlight of 2009 occurred in September when construction of the facility moved into three dimensions.

Approval was granted in August by the Department of Defense Explosives Safety Board (DDESB) for the design of the blast containment area of the Munitions Demilitarization Building (MDB). Eager to move forward, the facility erected the first vertical rebar for the blast containment area of the MDB in September. The blast area accounts for about 20 percent of the MDB's total area, however, a great deal of progress was made on other portions of the building while the blast area design awaited approval.

The blast containment area is critical to the function of the MDB as it will host the separation of the explosive components from the chemical munitions. This role also demands a very substantial design to protect occupants of the facility in the unlikely event of an accident during separation.

The approved design includes a special type of concrete poured into thick concrete walls and exceptionally dense rebar set vertically as opposed to horizontally, which gives the walls special characteristics. Because this design is very unique, a "mock wall" was built to demonstrate the method of construction and to verify that this method will be successful.

Dense vertical rebar provides superior blast protection.

Core samples were taken to determine an effective pour method.

A mock wall was erected to test the specialized concrete.

CSEPP Exercise Enhances Readiness

By: Bill Lunsford

The Chemical Stockpile Emergency Preparedness Program (CSEPP) conducted an exercise Oct. 28, 2009, to simulate a chemical spill emergency at the Blue Grass Army Depot (BGAD). The spurious chemical agent spill was larger and less predictable than used in the past. Evacuation and other emergency response activities proved to be a challenging and effective learning experience. Numerous hospitals in the region used medical student volunteers as victims of chemical agent burns and hysteria to practice and evaluate response procedures.

This activity demonstrated effective coordination between surrounding counties and Blue Grass Army Depot personnel

The Emergency Operations Center (EOC) at BGAD coordinated all response activities. Personnel within the EOC received and transmitted information to the emergency response zones. The EOC also has been used in the past to help coordinate local weather emergency response.

This activity demonstrated effective coordination between surrounding counties and Blue Grass Army Depot personnel. The Kentucky Department for Environmental Protection was represented and the exercise also was evaluated on the federal level. CSEPP is a collaborative effort of the United States Army and the Federal Emergency Management Agency (FEMA).

New Faces and Positions for BGAD Field Office

Joe DePetro

Joe DePetro joined KDEP's BGAD team in October as an environmental inspector III. Joe came to us from Arkansas DEQ where he was a RCRA Hazardous Waste inspector for the past four years.

Prior to moving south to Arkansas, Joe spent 20 years working for various environmental Department of Defense contractors, conducting compliance inspections at military installations in the north eastern United States.

A native of upper Michigan, Joe currently resides on a horse farm outside of Lexington with his German Shepherd, Fiona. Joe is the father of two girls in their early 20s and a 3-year-old boy. He enjoys fishing especially for trout and salmon, bow hunting, camping, and dog shows in his spare time.

Amy Miller McCracken

Amy Miller McCracken has been promoted to environmental inspector III for the BGAD section, and looks forward to beginning her duties on Jan. 16th.

Amy graduated from the University of Kentucky (UK) with a Bachelor of Science in biology. She has been with the Department of Environmental protection for four and half years,

conducting hazardous waste inspections for the Frankfort field office for the past three and half.

Amy, an Ohio County native, currently resides in Lexington with her husband of one and half years with their three, four legged children (two cats and a dog). She enjoys spending time with her family, hiking, fishing, camping, cooking and traveling in her spare time.

Permitting Team Receives New Members

The Bluegrass Army Depot permitting section is preparing for the increased activity taking place with Blue Grass Chemical Agent Pilot Plant (BGCAPP) with new team members.

Ryan Kirkpatrick

In August, **Ryan Kirkpatrick** started her new position as an Environmental Engineer Assistant I for the BGAD Section of the Hazardous Waste Branch. The San Diego, CA native earned a B.S. in Biosystems Engineering with an emphasis on the environment and sustainability from the University of Kentucky in 2008

Hired in September, **Daniel Walker** assumed the role as an Environmental Technologist I for the BGAD of the Hazardous Waste Branch. Daniel is a graduate of Eastern Kentucky University with a B.S. in Environmental Studies and a minor in Geology. Interests include traveling, live music, hiking, and stream ecology.

The new employees are eager to learn about the project and dedicated to the timely, efficient handling of any responsibilities they undertake.

Daniel Walker

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The mission of the Kentucky Division of Waste Management is to protect human health and the environment by minimizing adverse impacts on all citizens of the commonwealth through the development of fair, equitable, and effective waste management programs.

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200 Fair Oaks Lane sees a snowy day

Photographs courtesy of ACWA, BGCAPP, CSEPP, and KDEP